

Jake Donovan

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EDUCATION

North Carolina State University

Raleigh, NC

Bachelor of Science in Computer Science

May 2024

- **Relevant Coursework:** Data Structures and Algorithms, Applied Web-Based Server Computing, Software Engineering.

Tallahassee Community College

Tallahassee, FL

Associate of Arts

May 2020

PROJECT EXPERIENCE

Smart Brain

- Created React frontend components for a sign-in page, register page, ranking, image input, forgot password page, and reset password page to provide a responsive and interactive interface for users.
- Implemented an Express server as a gateway for users to interact with the backend. Through API routes, the user can interact with the Clarifai API to find faces in images, detect potential celebrities, and update frontend state.
- Constructed a PostgreSQL database to store account information. This provides a mechanism for allowing users to log in to the Smart Brain application and to store information such as valid image entry counts, which will be used in a ranking system.

Chemistry Visualization Tool

- Collaborated with 4 people with a focus in development to create a web application that can be used as a learning aid for NC State Students taking Organic Chemistry by displaying an animated version of an SN2 Reaction.
- Implemented test cases using Vitest, to help verify the application's functionality and increase test coverage. With combined efforts from teammates, test cases covered 80.39 percent of the application. The initial goal was 70 percent overall coverage for the team to feel confident that the application would function as intended.
- Created a stepping forwards/backwards feature for SN2 Reaction Player, and constructed new orbitals using TypeScript, Three.js, and React. Also helped create functionality for displaying charges with assistance from teammates.
- Presented a 10-minute overview of the current state of the web application with one teammate to senior design class at the midpoint of the semester.

SKILLS

- HTML, CSS, JavaScript, Express.js, Node.js, React.js, PostgreSQL.